

**THE ACADEMY FOR EDUCATIONAL DEVELOPMENT**  
**Cooperative Agreement No. 278-A-00-00-00201-00**

**THE WATER EFFICIENCY AND PUBLIC  
INFORMATION FOR ACTION (WEPIA)**

**AWQAF PROGRAM EVALUATION**

**REPORT**

**April, 2002**

## **Introduction**

WEPIA, in cooperation with the Jordan Environment Society and the Ministry of Awqaf and Religious Affairs, carried out this project in an effort to build capacity in mosques to undertake its promotional and educational initiatives.

WEPIA has decided to undertake a water efficiency exercise in some mosques in Amman. The Imams in the selected mosques were trained to institute regimes of water saving.

The objective of this exercise was to train Imams in ten mosques and 60 worshippers who attend these mosques to improve water usage and water saving in the surrounding communities, and to measure the effects of the campaign by carrying out surveys before and after these activities, checking knowledge, attitudes and perceptions.

The pre-campaign KAP survey consisted of interviews with a sample of 350 households in different areas in Amman. This activity was carried out in January last year.

The contract with the Jordan Environment Society stipulates the following objectives:

- 1- Increase knowledge of Water Saving Devices and water conservation among worshippers at mosques.
- 2- Visits to worshippers' homes by Imams and laypersons to educate people on water saving issues, water audits and WSD's.

Each Imam was supposed to train 10 laypersons and certain forms were to be collected for monitoring purposes.

The research consisted of two main parts:

- Test panel: this includes 8 randomly selected mosques from the list supplied by JES which includes all the mosques that were selected for their training program.
- Control panel: two mosques, one in East Amman and one in West Amman, were randomly selected. JES activities did not include these mosques.

List of the selected mosques is appended to the report.

In each of the test panel mosques, the following interviews were done

- One with the Imam of the mosque.
- 3 interviews with selected laypersons.
- 8 interviews with worshippers as they finish the evening prayers.

In addition the following interviews were done:

- Two with Waethat (women lecturers)
- 16 with women worshippers in the waethat's mosques.

In each of the control panel mosques, the following interviews were done:

- One with the Imam of the mosque.
- 8 with worshippers as they finish the evening prayers.

Results of the relevant questions were compared with those of the pre KAP study. However, caution should be exerted when comparing the results since the sample sizes are different.

The current research is based on small sample sizes. Although the numbers are adequate, but hard statistical comparisons with other data cannot be drawn. Comparisons are used only to provide guidelines and indications.

Overall, the results of the study suggest that the capacity building scheme at mosques has had only minimal effect upon water conservation awareness and practice.

Although worshippers within the test area were more likely to be aware of water saving pieces than others, there is no evidence to suggest that such awareness was generated by this particular scheme.

The scheme appears to have been more effective in reaching female worshippers although the small numbers involved do not lend themselves to a definite conclusion.

## Findings:

### Imams and Waethat interviews

Two Imams were not trained, and one does not recall the date of training. The two waethat were trained last year.

Five are university graduates, two have diplomas and one high school.

One has his own house, the others are awqaf property.

### 1. Lectures given on water conservation

The Imams who were trained have given lectures to worshippers.

	<b>Imams</b>		<b>Waethat</b>
	<b>Test</b>	<b>Control</b>	
	<b>(8)</b>	<b>(2)</b>	<b>(2)</b>
Total lectures given since trained	32	N/A	23
Total lectures given during past 2 months	10	-	16
Total attendees	2045	-	505

The topics of the lectures were as follows:

- Keeping the mosque clean and conserve water
- Water conservation
- WSD's

Most of the lectures were given after the evening prayers, few were given on Friday after the noon prayer.

Topics covered by waethat:

- Water conservation/ water saving methods
- WSD's
- Water sources in Jordan
- Quranic verses that relate to water conversation
- WSD's and sources of purchase
- Water in the Quran and the Suna

Most of the lectures were given in mosques, in two instances they were given in homes.

The two waethat used the “Imam’s Guide” in their lectures, while 5 of the 8 Imam’s in the test panel did not use it.

The guide was mostly used in lectures and khutbas, and in two instances it was used during in-home visits.

One of the Waethat and one Imam in the test panel have visited worshippers in their homes to educate them on and to conduct water audits. The waetha visited two homes and explained about the WSD’s and showed the housewife how the aerator works by measuring the water flow before and after installing it.

The Imam visited 19 homes to explain about the WSD’s.

One waetha and only 5 Imams in the test panel thought that it was possible to visit 5 homes each month. And only one Imam in the test panel thought that it was possible to give 2 lectures every month on water conservation.

Only one Imam in the test panel uses special days (e.g. Water Day) to discuss water. None of the Imam’s gave any khutba on March 22<sup>nd</sup>.

When asked about raising money to retrofit the mosques, only two tried to raise the funds but were unsuccessful either because people were not interested or that it needs a special committee for collecting donations.

One of the Imam’s in the control group tried to raise funds and was successful. The money was used to construct an underground water well and placing a motor to pump water to the tanks and conducted maintenance work to the sanitary outlets.

The waethat trained four women in their community to help them in their work, while two of the Imams trained 15 laypersons. The rest did not train anybody.

As for the audit forms, one waetha received the forms from the worshippers and they were compared with previous visits and were sent to JES. None of the Imams received any form.

One waetha trained two worshippers to conduct water audits.

The most important messages that the Imams and waethat would share with the worshippers were as follows:

<b>Most important message shared with the worshippers</b>	<b>Imam</b>	<b>Control</b>	<b>Waethat</b>
	<b>(8)</b>	<b>(2)</b>	<b>(2)</b>
They can save money with this program	2	0	0
God wants them to use water wisely	5	2	2
The country needs them to save water	1	0	0
Jordan has limited water resources	0	0	0

- Only one waetha gave a copy of suppliers list to the worshippers so they can purchase their own WSD.
- Only two imams and one imam from the control gave a copy of the suppliers list to the worshippers so they can purchase their own WSD.

When asked about reasons for not visiting worshippers, the comments were as follows:

<b>Reasons for not visiting worshippers</b>	<b>Waethat</b>	<b>Imam Test</b>	<b>Imam Control</b>
	<b>(2)</b>	<b>(8)</b>	<b>(2)</b>
Time	0	4	1
Too many other things to do	0	0	0
Facilities are poor	1	0	0
People aren't interested	1	2	2
People are too poor	1	2	0

A comment was made by one of the waethat which might be worth mentioning; which is the WSD works only on new faucets and most of the people have the old faucets in their homes.

As for the JES follow-up, five of the Imams in the test panel were recently contacted:

	<b>Waethat</b>	<b>Imam Test</b>	<b>Imam Control</b>
	<b>(2)</b>	<b>(8)</b>	<b>(2)</b>
1 month ago	1	2	0
1 week ago	1	3	0
This week	0	0	0
Never	0	1	2

A comment was mentioned by the two remaining Imams that the JES hasn't called for the past 6-7 months.

### **Laypersons interviews**

A list of the trained laypersons allocated to different mosques was supplied to MRO. 24 interviews were to be conducted among a sample of the laypersons. Only 14 interviews were done.

Interviews with Imams showed that some did not train any layperson, and, therefore, could not identify any.

11 of the 14 did not give any lectures on water conservation. Each of the remaining three did 3, 4 and 6 lectures. Nine lectures were done during the past two months. The total number of those attending the lectures was 265 persons.

The topics that were covered in these lectures were the following:

- 4 on water saving conservation.
- 3 on the use of WSD's.
- 2 on water audits.

The lectures were given in mosques and homes after the afternoon and evening prayers.

None of the laypersons used the "Imam's Guide to Water Conservation Program".

The 3 laypersons visited worshippers homes to educate their residents on water audits and how to conduct them. The visits lasted 30 minutes each. However, when asked if they had shared the suppliers' list, 6 laypersons claimed to have done so.

Among the three, a total of 19 visits were done. Laypersons claim that a total of 230 people residing in their areas were trained on water audits.

Only 4 laypersons believed that they were able to make 5 home visits and give 2 lectures per month. And none use special days to discuss water issues, for example Water Day.

Only three tried to raise money to retrofit the mosques, but could not carry it further because of the legal issues involved. The remaining 3 claimed that they could not do it because they either had other commitments, it is the Imam's responsibility to do so or because people are not interested in such issues.

None of the 14 laypersons filled any water audit form.



When asked what do they consider to be the single, most important message that they have to share with worshippers, the laypersons answered as follows:

They can save money with this program	4
God wants them to use water wisely	3
The country needs them to save water	4
Jordan has limited water resources	3

The reasons given for not visiting worshippers in their homes and providing education classes or from hosting more education classes in the mosque:

- Time 6
- Too many other things to do 3
- Facilities are poor -
- People aren't interested 5
- People are too poor -

All laypersons mentioned that they had never been contacted by JES, either through visits or correspondence or phone calls.

## Worshippers interviews

### 1. Sources of water supply to Jordan

Almost all could name sources of water supply to Jordan. Two in the test panel could not name any source. The average number was 2.7 for the test panel, and 3 for the control panel.

#### Sources of water supply to Jordan

Base: all respondents

	Control	Test panel	
		Male	Female
<b>Base:</b>	<b>(16)</b>	<b>(64)</b>	<b>(16)</b>
	%	%	%
Rainfall	88	80	94
Dams	81	69	81
Neighboring countries	38	17	31
Surface water	31	27	19
Renewable underground water	25	45	44
Non-renewable underground water	6	27	-
Waste water treatment	6	8	19
Other	25	5	-
Don't know	-	3	-

## 2. Source of awareness

4% of the males in the test panel named “khutba” and “layperson” as sources of information.

### Sources of awareness

Base: all respondents

	Control	Test panel	
		Male	Female
Base:	(16)	(64)	(16)
	%	%	%
TV	50	44	56
Friends/ relatives	6	22	-
Khutba	-	2	-
Layperson	-	2	25
Newspapers	31	9	19
General knowledge	50	33	25
Schools	19	25	-
Books	-	2	-
Other	-	2	6

### 3. Reasons for water shortages

- Almost all could name at least one reason for the water shortage in Jordan. The average number in the test panel was 2.7, and in the control panel it was 2.9.
- Across all three groups, the low amount of rainfall and old, worn-out networks and, to a lesser extent over population, were the most widely mentioned causes.

#### Reasons for water shortage in Jordan

Base: all respondents

	Control	Test panel	
		Male	Female
Base:	(16)	(64)	(16)
	%	%	%
Little rainfall	81	72	75
Old worn-out networks	81	50	56
Over population	56	42	19
Mismanagement	19	13	13
Limited natural resources	19	23	19
Overuse of underground wells	13	13	13
Waste by consumers	6	11	31
Political reasons	-	5	6
Industrial waste	-	8	-
Agriculture	-	5	31
Expansion in industrial sector	-	8	-
In-migration	-	5	-
Other	13	14	6
Don't know	-	2	-

#### 4. Source of awareness of reasons for shortage

- Television is a major source of information although less so among males.

#### Sources of Awareness

Base: All who named sources

	Control	Test panel	
		Male	Female
<b>Base:</b>	<b>(16)</b>	<b>(62)</b>	<b>(16)</b>
	%	%	%
TV	63	47	63
General knowledge	44	27	25
Newspapers	38	23	6
Friends/Relatives	6	19	-
Khutba at mosque	-	3	-
Lay person at mosque	-	2	25
Other	6	21	6
Don't know	-	2	-

#### 5. Action to conserve water

- The great majority of respondents in the Pre KAP have taken steps to conserve water in their homes.
- 41% of the male worshippers in the test panel and 13% in the control panel have not done anything in their homes to save water. The females have taken some kind of measure to that effect.

### Action to conserve water

Base: all respondents

	Test panel		Control	Pre KAP
	Male	Female		
Base:	(64)	(16)	(16)	(350)
	%	%	%	%
Using only when necessary/ Reduce consumption	27	44	63	57
Sweeping rather than washing floors	16	13	25	35
Use bucket to clean	8	31	38	31
Repairing leaks as they occur	-	9	31	26
Reduced frequency of laundry	6	6	13	23
Checking for leakages	19	5	31	23
Re-use of water	6	25	-	14
Install water saving device on faucets	14	44	6	7
Bottles in toilet tanks	5	-	6	5
Other actions	14	6	13	3
Nothing done	41	-	13	6

## 6. Water Saving Devices

- 57% of respondents in the Pre KAP claimed to have heard of water savings devices.
- Level of awareness of the WSD's among the test panel was higher among the females (94%), while 31% of the males had heard of them.

### Awareness of specific devices

Base: all respondents

	Control	Test panel	
		Male	Female
<b>Base:</b>	<b>(16)</b>	<b>(64)</b>	<b>(16)</b>
	%	%	%
Yes	31	69	94
No	69	31	6

## 7. Whether installed in houses

- The likelihood of installation was greater among the male and female worshippers than among the control panel.

### Whether installed piece in house

Base: All aware of pieces

	Control	Test panel	
		Male	Female
<b>Base:</b>	<b>(5)</b>	<b>(44)</b>	<b>(15)</b>
	%	%	%
Yes	20	36	40
No	80	64	60

- Among the few who had installed water saving pieces, savers on faucets were the most common.

### Water saving piece installed in home

Base: All installing pieces in home

	Control	Test panel	
		Male	Female
<b>Base:</b>	<b>(1)</b>	<b>(16)</b>	<b>(6)</b>
	<b>%</b>	<b>%</b>	<b>%</b>
Water savers on faucets	-	94	100
Water savers on showers	-	19	33
6 litres toilet tanks	100	6	-

- Television and to a lesser extent radio are important sources of information about water saving pieces.
- Lay people in mosques were an important source for female worshippers.

### Sources of knowledge of pieces

Base: all aware of pieces

	Control	Test panel	
		Male	Female
<b>Base:</b>	<b>(5)</b>	<b>(44)</b>	<b>(15)</b>
	<b>%</b>	<b>%</b>	<b>%</b>
TV	60	48	53
Newspapers	40	23	7
Friends/relatives	20	14	-
Lay person in mosque	-	-	53
Khutba at mosque	-	11	-
General knowledge	-	11	-
Other	-	16	20



- The number of worshippers learning from Khutbas/lay persons is too small to draw any reliable conclusion. Lectures were more important for female worshippers.

#### Where information learned

Base: all learning from Khutba/lay person

	Control	Test panel	
		Male	Female
<b>Base:</b>	(-)	(5)	(8)
	%	%	%
Attend a lecture	-	-	75
Hear to Khutba	-	40	25
Come to the house	-	20	-
No answer	-	40	-

- The incidence of carrying out a water audit at home was generally low. Female worshippers were the most likely to have done so.

#### Water audit done in home

Base: all respondents

	Control	Test panel	
		Male	Female
<b>Base:</b>	(16)	(64)	(16)
	%	%	%
Yes	13	17	31
No	88	83	69

- All female worshippers but only a third of males had been approached by a lay person.

### Whether approached by a lay person

Base: all respondents

	Control	Test panel	
		Male	Female
<b>Base:</b>	<b>(16)</b>	<b>(64)</b>	<b>(16)</b>
	%	%	%
Yes	-	31	100
No	100	69	-

- Among those approached by a lay person, water conservation/saving water in the home was widely discussed among male and female worshippers.
- Female worshippers were more likely than males to report discussion on water saving devices, religious evidence and reasons for the water shortage.

### What information was given

Base: All approached by layperson

	Control	Test panel	
		Male	Female
<b>Base:</b>	<b>(-)</b>	<b>(20)</b>	<b>(16)</b>
	%	%	%
Water conservation/How to save water in home	-	95	81
Water saving devices/water savers	-	15	56
Religious evidence from Quran and Hadith on saving water	-	10	25
Reasons for water shortage in Jordan	-	-	19
Effectiveness of WSD's	-	10	-
Water sources in Jordan	-	-	6
Other	-	5	6

- Virtually all female worshippers but only two out of five male worshippers reported hearing Khutba or lesson in mosque on water in the past 2 months.

**Heard Khutba/lesson in mosque  
on water in past 2 months**

Base: all respondents

	Control	Test panel	
		Male	Female
<b>Base:</b>	<b>(16)</b>	<b>(64)</b>	<b>(16)</b>
	%	%	%
Yes	44	41	94
No	56	59	6

- Half of all female worshippers but only one in five male worshippers had been provided with printed materials.

**Whether provided with  
brochure or material**

Base: All respondents

	Control	Test panel	
		Male	Female
<b>Base:</b>	<b>(16)</b>	<b>(64)</b>	<b>(16)</b>
	%	%	%
Yes	-	19	50
No	100	81	50

- The major sources of printed materials were mosques, particularly so for female worshippers. Ministries were sources only among the male worshippers.

### Source of material

Base: All receiving brochures/materials

	Control	Test panel	
		Male	Female
<b>Base:</b>	(-)	(12)	(8)
	%	%	%
Mosques	-	50	88
Ministry of Awqaf	-	17	-
Ministry of Water	-	8	-
Waetha	-	-	-
Other	-	25	13

**APPENDIX**  
**LIST OF MOSQUES**

	<b>Mosques</b>
<b>1) Test</b>	Al -Jam'a
	Al-Mogerat
	Abdalla bin Al-Mas'od
	Al Naser
	Hussein Bin Talal *
	Al-Fadel Bin Al-Abbas
	Thu Al Nourain *
	Al-Anwar
<b>2) Control</b>	Abu Enshaish
	Osama Bin Zaid

\* Taken as substitutes for “Shoora” and Al-Shahid/ Al Taj” as they did not have lists of laypersons.